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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/555,275	10/10/2006	Gregory A. Marking	03-2-312	4599
24252	7590	09/19/2008		
OSRAM SYLVANIA INC 100 ENDICOTT STREET DANVERS, MA 01923			EXAMINER PATEL, ASHOK	
			ART UNIT 2889	PAPER NUMBER
			MAIL DATE 09/19/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/555,275

**Applicant(s)**

MARKING ET AL.

**Examiner**

Ashok Patel

**Art Unit**

2889

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 3-7 is/are allowed.
- 6) ☒ Claim(s) 2, 8 and 14-16 is/are rejected.
- 7) ☒ Claim(s) 9-13 and 17-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/003)
- Paper No(s)/Mail Date 11022005
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date: \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

1. The Examiner noticed that the some of the claims have been received in non-acceptable manner, specifically claims 7 and 14. Although the Examiner managed to obtain these two claims from corresponding PCT application PCT/US2004/015079 from WIPO internet web site, applicant is advised to re-submit these claims in their acceptable form.

2. Claims 2, 8-13, 15 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 2, 8 and 15, the number "0 20" appears be incorrect.

Claims 9-13 and 17 are necessarily rejected due to their dependencies on the rejected claims.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Verlijdsdonk (USPN 4827187).

Verlijdsdonk discloses applicant's claimed blue light including a blue emitting phosphor including an europium-activated, calcium-substituted barium hexa-aluminate phosphor. Since Verlijdsdonk's disclosed phosphor product includes all product features as recited in applicant's claim 14, Verlijdsdonk's disclosed phosphor is considered as formed by the method as recited in applicant's method claim 14. The artisan seeking the apparatus claim would necessarily perform the method as claimed.

As to claim 16, Verlijdsdonk discloses the phosphor as claimed by applicant, Verlijdsdonk's disclosed phosphor would be able to generate a vacuum ultraviolet light having wavelength 147nm to 173nm, as claimed by applicant.

5. Claims 1 and 3-7 are in condition for allowance.

6. Claims 8 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

7. Claims 2 and 15 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

8. Claims 9-13 and 16-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claims 1-7, prior art of the record does not disclose applicant's claimed VUV-excited device including a discharge chamber with a phosphor coating, the discharge chamber containing a rare gas or rare gas mixture, the phosphor coating being applied to an inner surface of the discharge chamber, the device when operated generating a discharge which emits vacuum ultraviolet radiation as a primary source of excitation, the phosphor coating containing a europium-activated, calcium-substituted barium hexa-aluminate phosphor.

As to claims 8-13, prior art of the record does not disclose applicant's claimed VUV-excited device including a discharge chamber with a phosphor coating, the discharge chamber containing a rare gas or rare gas mixture, the phosphor coating being applied to an inner surface of the discharge chamber, the device when operated generating a discharge which emits vacuum

ultraviolet radiation as a primary source of excitation, the phosphor coating containing a europium-activated, calcium-substituted barium hexa-aluminate phosphor having a composition which is represented by  $\text{Ba}_{1.29-x-y}\text{Ca}_x\text{Eu}_y\text{Al}_{12}\text{O}_{19.29}$ , wherein  $0 < x < 0.25$  and  $0.01 < y < 0.20$ .

As to claims 15 and 17, prior art of the record does not disclose applicant's claimed method of generating blue light including exciting a blue-emitting phosphor with vacuum ultraviolet radiation, the blue-emitting phosphor including an europium-activated, calcium-substituted barium hexa-aluminate phosphor having composition represented by  $\text{Ba}_{1.29-x-y}\text{Ca}_x\text{Eu}_y\text{Al}_{12}\text{O}_{19.29}$ , wherein  $0 < x < 0.25$  and  $0.01 < y < 0.20$ .

As to claim 18, prior art of the record does not disclose applicant's claimed method of generating blue light including exciting a blue-emitting phosphor with vacuum ultraviolet radiation, the blue-emitting phosphor including an europium-activated, wherein the phosphor coating additionally contains a phosphor selected from the group consisting of europium-activated barium magnesium aluminate, europium-activated barium magnesium aluminate coated with aluminum oxyhydroxide, and  $(\text{Gd}, \text{La})\text{PO}_4:\text{Tm}, \text{Li}$ .

As to claim 19, prior art of the record does not disclose applicant's claimed method of generating blue light including exciting a blue-emitting phosphor with vacuum ultraviolet radiation, the blue-emitting phosphor including an europium-activated, wherein the phosphor coating additionally contains a (Gd,La)PO<sub>4</sub>:Tm,Li phosphor and a ratio of the europium-activated, calcium-substituted barium hexa-aluminate phosphor to the (Gd,La)PO<sub>4</sub>:Tm,Li is in the range from 2:1 to 20:1 by weight.

As to claim 19, prior art of the record does not disclose applicant's claimed method of generating blue light including exciting a blue-emitting phosphor with vacuum ultraviolet radiation, the blue-emitting phosphor including an europium-activated, wherein the europium-activated, calcium-substituted barium hexa-aluminate phosphor is coated with aluminum oxyhydroxide.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok Patel whose telephone number is 571-272-2456. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on 571-272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2889

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ashok Patel/  
**Ashok Patel**  
**Primary Examiner**  
**Art Unit 2879**